

REMARKS

Claims 1-4 and 7 of the present application stand rejected as obvious over Tanaka in view of Zehavi. Applicants respectfully traverse this rejection and beg for reconsideration in the light of the following remarks. Applicants thank the Examiner for kindly indicating that claims 5 and 6 would be allowable if appropriately rewritten.

The invention as described by independent claims 1 and 7 involves a step of receiving rate information and a step of adapting a communication channel. Each of these steps is carried out at some rate. For example, in an illustrative time-division multiplexed system, rate information corresponding to a given wireless unit is received once every M timeslots, and a communication channel between the wireless unit and the base station is adapted once every N timeslots. "Adapting the communication channel" involves, in one example, adapting the data rate for transmission over the channel.

In contrast to methods of the prior art, the rate of adaptation, according to the present invention, is not equal to the rate at which information is received. For example, in the illustrative system described above, N is not equal to M.

In specific embodiments of the invention as described in claim 2, instances of receiving rate information for a given channel recur at a lower rate than instances of adapting the channel. For example, in the illustrative system described above, the cycle time M for receiving rate information is longer than the cycle time N for adapting the channel.

The Examiner has cited *Tanaka* as disclosing a method in which the base station periodically receives rate information from the wireless unit and responsively adjusts the data rate. However, *Tanaka* contains no suggestion that the cycle time for receiving rate information should be any different from the cycle time for adjusting the data rate. On the contrary, *Tanaka* teaches that these cycle times should be the same. That is, at Column 4, line 65, to Column 5, line 4, *Tanaka* describes the mobile unit as periodically sending an explicit transmission-rate assignment signal to the base station. "In response to the signal, the base station 20 sends the control signal at the newly set transmission rate." *Id.* at Column 5, lines 1-2. The practitioner of ordinary skill reading that description in *Tanaka* would naturally conclude that the base station adapts in response to

each and every such transmission-rate assignment signal. Thus, Tanaka teaches away from the present invention.

The Examiner has cited *Zehavi* as disclosing a wireless system in which the downlink (i.e., base station to wireless unit) data rate is independent of the uplink data rate and depends on the distance between the base station and the wireless unit. The Examiner has asserted that on this basis, it would be obvious “to communicate with a wireless unit at a rate different from the rate of the rate information in order to improve system flexibility.” *Office Action*, page 3, lines 1-3.

Even if the Examiner’s assertion is *arguendo* granted, it misses the essential point that to meet the limitations of the claimed invention, a rate of adaptation must be different from the rate at which “rate information” is received.

Although *Zehavi* does describe a system in which a downlink data rate is adapted based on a distance or effective distance between the base station and the wireless unit, it suffers the same deficiency as Tanaka: That is, *Zehavi* also fails to provide any explicit teaching as to how the cycle time for receiving rate information should relate to the cycle time for adjusting the data rate. If there is any implicit suggestion in *Zehavi*, that suggestion is that the respective cycle times should be the same. For example, *Zehavi* at Column 6, line 58, to Column 7, line 2, states in pertinent part as follows:

Transmission controller **104** selects an encoding rate in accordance with the distance between subscriber station **6A** and base station **1**. In a preferred embodiment the distances between base station **1** and subscriber station **6A** is quantized in to discrete values . . . [A]ll subscriber stations that are located between base station **1** and the circle **7A** would receive information at the first encoding rate. All subscriber stations that are located between circle **7A** and the circle **7B** would receive information at a second encoding rate. All subscriber stations that are located between circle **7B** and the circle **7C** would receive information at a third encoding rate.

To one of ordinary skill in the art, the preceding passage would suggest, if anything, that the base station’s response to each and every distance measurement is to update the data rate depending on which of the three specified circles currently contains

the pertinent wireless unit. Thus the direction of any suggestion present in Zehavi is away from the present invention.

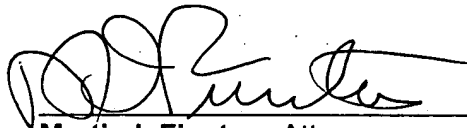
For the reasons set out above, Applicants submit that all claims of the present application are patentable over Tanaka and Zehavi under the standard of 35 USC 103.

New independent claims 8 and 9 are added by the present amendment. It is respectfully submitted that the new claims add no new matter. Specifically, adaptation of a data rate based on feedback information is supported in the Specification at, *inter alia*, page 3, lines 12-16, page 4, lines 15-24, page 5, line 24, to page 6, line 2, and page 6, lines 17-29.

As requested by the Examiner, Figure 1 will be designated by the legend —Prior Art—. A proposed drawing correction is enclosed herewith.

Having responded to all points of objection and rejection, Applicants respectfully solicit allowance of all claims now pending.

Respectfully,

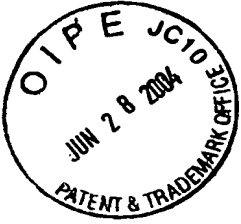


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Attachments: 2 Sheets of Drawings

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FIG. 1
(PRIOR ART)

